

Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China

Tel: (86)755-82591330

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Internet: Http://www.LCS-cert.com

Report No.: LCS171214002AR

TEST REPORT

Client company : Shenzhen Four Seas Global Link Network Technology Co., Ltd.
 Client address : Room 607-610, Block B, TAOJINDI Electronic Business Incubation Base, Tenglong Road, Longhua District, Shenzhen, China
 Manufacturer : Shenzhen Four Seas Global Link Network Technology Co., Ltd.
 Address : Room 607-610, Block B, TAOJINDI Electronic Business Incubation Base, Tenglong Road, Longhua District, Shenzhen, China

Report on the submitted samples said to be:

Sample Name : wireless adapter

Trade Mark : COMFAST

Style/ Item No. : CF-WU810N, CF-WU712P, CF-WU715N, CF-WU720N, CF-WU725B, CF-WU825N V2, CF-WU835P, CF-WU735P, CF-WU756P, CF-WU755P, CF-WU855P, CF-WU670N, CF-WU770N, CF-WU771N, CF-WU883NL, CF-WU7200ND V2, CF-WU7201ND, CF-WU7300ND, CF-7500AC, CF-912AC, CF-917AC, CF-915AC, CF-916AC, CF-913AC V2, CF-923AC, CF-926AC V2, CF-WU757F V2, CF-WU710 V2, CF-WU815N, CF-WU910A, CF-WU925A, CF-WU772N, CF-927AC, CF-928AC, CF-929AC, CF-925AC, CF-910AC, CF-7300AC, CF-WU773A

Sample Receiving Date : December 18, 2017

Testing Period : December 18, 2017~ January 10, 2018

Results : Please refer to next page(s).

Summary of Test Results:

TEST REQUEST

CONCLUSION

A EU RoHS Directive 2011/65/EU and its amendment directives

PASS

Signed for and on behalf of LCS

Written By: Linda Ning
 Linda Ning

Checked by: Suez Su
 Suez Su

Approved by: Fung Xiao

 Fung Xiao

Results:

A. EU RoHS Directive 2011/65/EU and its amendment directives on XRF

Test method: With reference to IEC 62321-3-1:2013, Screening by X-ray Fluorescence Spectroscopy (XRF)

Seq. No.	Tested Part(s)	Results				
		Pb	Cd	Hg	Cr	Br
A	wireless adapter					
1	White plastic	BL	BL	BL	BL	BL
2	black plastic	BL	BL	BL	BL	BL
3	Silver metal shell	BL	BL	BL	BL	BL
4	Transparent tape	BL	BL	BL	BL	BL
5	Silver metal	BL	BL	BL	BL	BL
6	Black IC	BL	BL	BL	BL	BL
7	Patch capacitance	BL	BL	BL	BL	BL
8	Gold metal	BL	BL	BL	BL	BL
9	Patch resistance	BL	BL	BL	BL	BL
10	Black IC	BL	BL	BL	BL	BL
11	Patch capacitance	BL	BL	BL	BL	BL
12	PCB board	BL	BL	BL	BL	X
13	Patch capacitance	BL	BL	BL	BL	BL
14	Patch resistance	BL	BL	BL	BL	BL
15	Transparent plastic	BL	BL	BL	BL	BL
16	Yellow coating	BL	BL	BL	BL	BL
17	White coating	BL	BL	BL	BL	BL
18	Tin solder	X	BL	BL	BL	BL

Note:

- = Not Conducted
- * = Screening by XRF and detected by chemical method. The test results of chemical method please refer to next pages.

i Results were obtained by XRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs, PBDEs) are recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013.

Element	Unit	Non-metal	Metal	Composite Material
Cd	mg/kg	$BL \leq 70 - 3\sigma < X < 130 + 3\sigma \leq OL$	$BL \leq 70 - 3\sigma < X < 130 + 3\sigma \leq OL$	$BL \leq 50 - 3\sigma < X < 150 + 3\sigma \leq OL$
Pb	mg/kg	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 500 - 3\sigma < X < 1500 + 3\sigma \leq OL$
Hg	mg/kg	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 500 - 3\sigma < X < 1500 + 3\sigma \leq OL$
Cr	mg/kg	$BL \leq 700 - 3\sigma < X$	$BL \leq 700 - 3\sigma < X$	$BL \leq 500 - 3\sigma < X$
Br	mg/kg	$BL \leq 300 - 3\sigma < X$	--	$BL \leq 250 - 3\sigma < X$

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Note:

- BL = Below Limit
- OL = Over Limit
- X = Inconclusive

- ii The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.
- iii The maximum permissible limit is quoted from the document 2005/618/EC amending RoHS directive 2011/65/EU:

RoHS Restricted Substances	Maximum Concentration Value (mg/kg) (by weight in homogenous materials)
Cadmium (Cd)	100
Lead (Pb)	1000
Mercury (Hg)	1000
Hexavalent Chromium (Cr(VI))	1000
Polybrominated biphenyls (PBBs)	1000
Polybrominated diphenylethers (PBDEs)	1000

Disclaimers:

This XRF Screening report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes.

The result shown in this XRF screening report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.

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B. The Test Results of Chemical Method:

Test method:

Lead & Cadmium Content:

With reference to IEC 62321-5:2013, by acid digestion and analysis was performed by inductively coupled plasma atomic emission spectrometer (ICP-OES)

Mercury Content:

With reference to IEC 62321-4:2013, by acid digestion and analysis was performed by inductively coupled plasma atomic emission spectrometer (ICP-OES)

Hexavalent Chromium Content:

With reference to IEC 62321:2008 and IEC 62321-7-1:2013, by alkaline digestion and analysis was performed by UV-visible spectrophotometer (UV-Vis)

PBBs & PBDEs Content:

With reference to IEC 62321-6:2015, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS)

1) The test results of Lead (Pb)

Item	Unit	MDL	Results	Limit
			(18)	
Lead Content (Pb)	mg/kg	2	N.D.	1000 mg/kg
Conclusion	/	/	Pass	/

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2) The test results of PBBs & PBDEs

Item	Unit	MDL	Results	Limit
			(12)	
Polybrominated Biphenyls (PBBs)				
Monobromobiphenyl	mg/kg	5	N.D.	
Dibromobiphenyl	mg/kg	5	N.D.	
Tribromobiphenyl	mg/kg	5	N.D.	
Tetrabromobiphenyl	mg/kg	5	N.D.	
Pentabromobiphenyl	mg/kg	5	N.D.	
Hexabromobiphenyl	mg/kg	5	N.D.	
Heptabromobiphenyl	mg/kg	5	N.D.	
Octabromobiphenyl	mg/kg	5	N.D.	
Nonabromodiphenyl	mg/kg	5	N.D.	
Decabromodiphenyl	mg/kg	5	N.D.	
Total content	mg/kg	/	N.D.	1000 mg/kg
Polybrominated Diphenylethers (PBDEs)(Mon-Deca)				
Monobromodiphenyl ether	mg/kg	5	N.D.	
Dibromodiphenyl ether	mg/kg	5	N.D.	
Tribromodiphenyl ether	mg/kg	5	N.D.	
Tetrabromodiphenyl ether	mg/kg	5	N.D.	
Pentabromodiphenyl ether	mg/kg	5	N.D.	
Hexabromodiphenyl ether	mg/kg	5	N.D.	
Heptabromodiphenyl ether	mg/kg	5	N.D.	
Octabromodiphenyl ether	mg/kg	5	N.D.	
Nonabromodiphenyl ether	mg/kg	5	N.D.	
Decabromodiphenyl ether	mg/kg	5	N.D.	
Total content	mg/kg	/	N.D.	1000 mg/kg
Conclusion	/	/	Pass	/

Note:

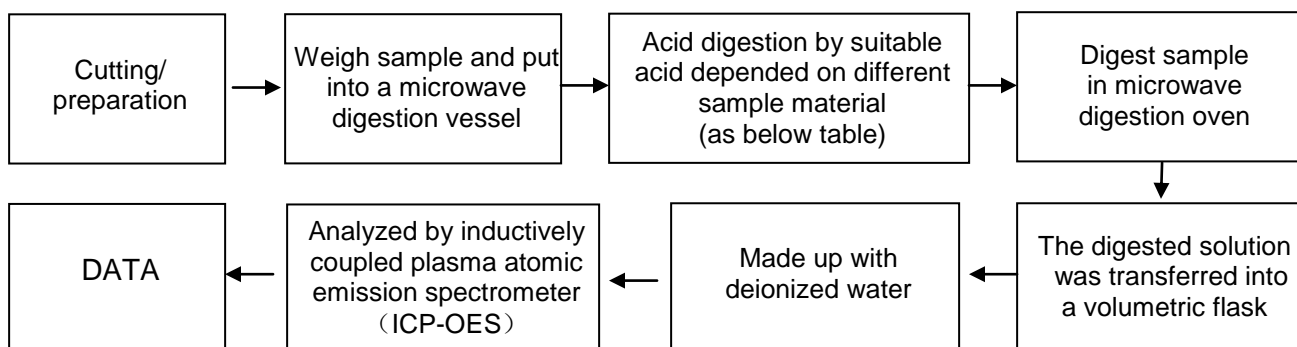
- N.D. = Not Detected or less than MDL
- mg/kg = ppm
- MDL = Method Detection Limit
- Photo appendix is included.

Appendix I

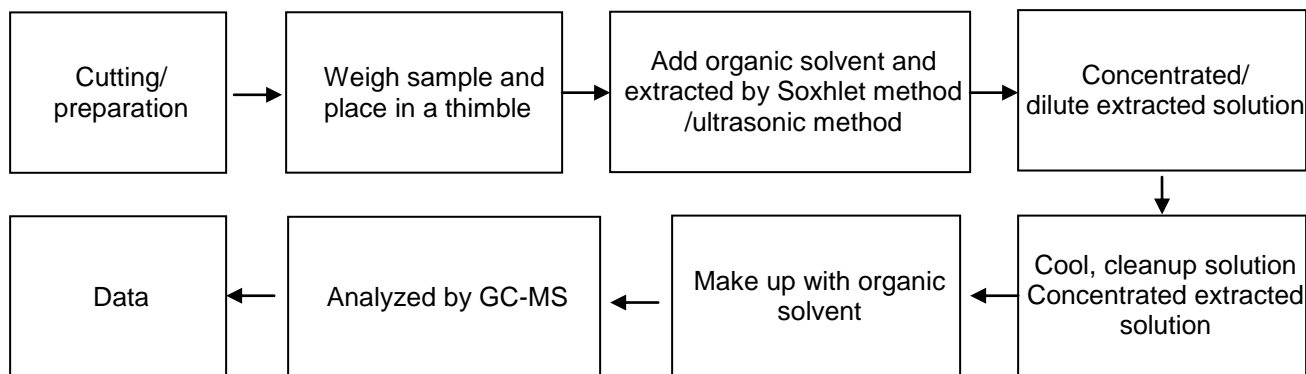
Test Flow chart

1. Test Flow chart for Cd / Pb /Hg content

These samples were dissolved totally by pre-conditioning method according to below flow chart.

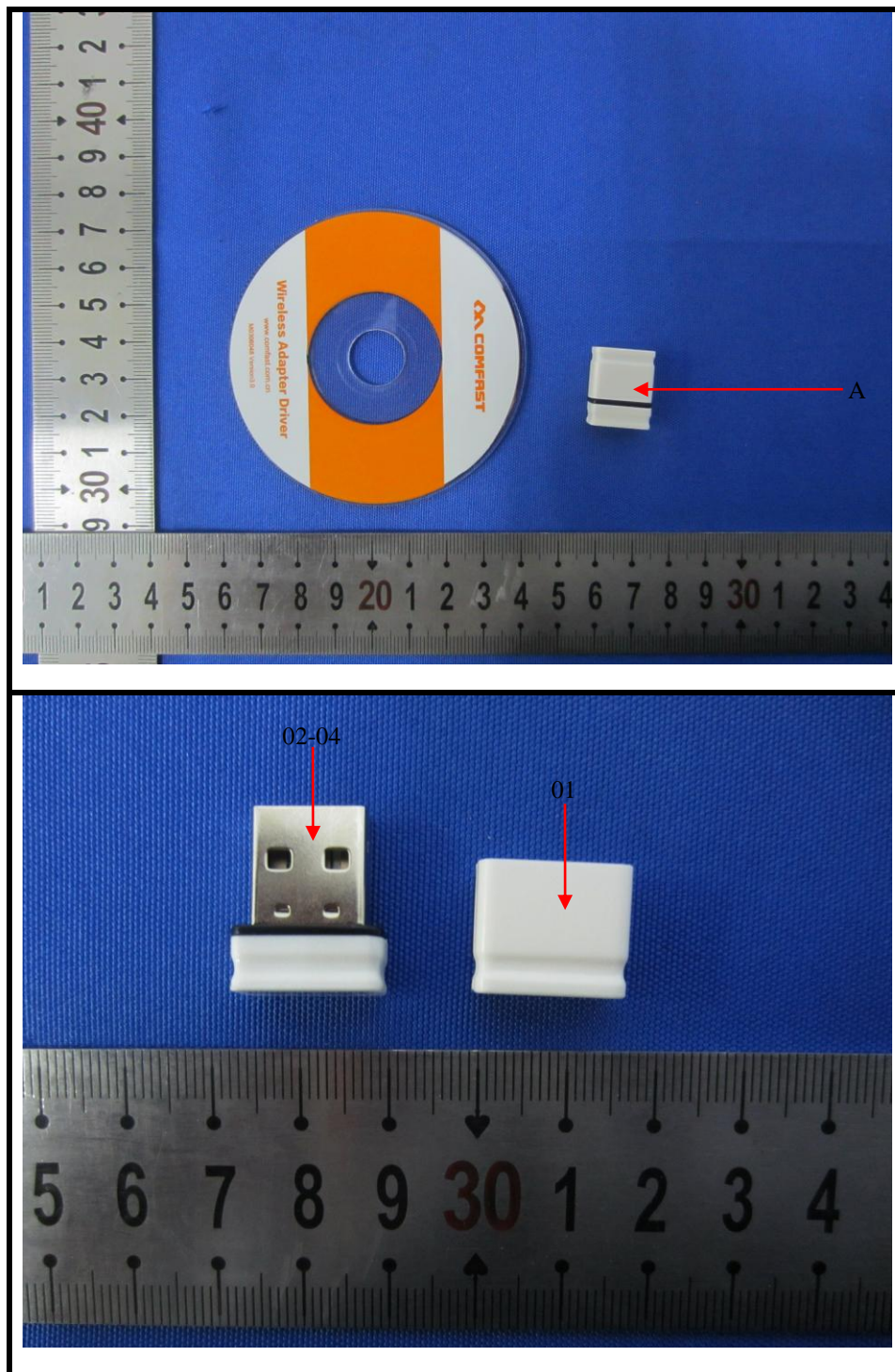


3. Test Flowchart for PBBs & PBDEs content



Appendix II

Photograph of Sample



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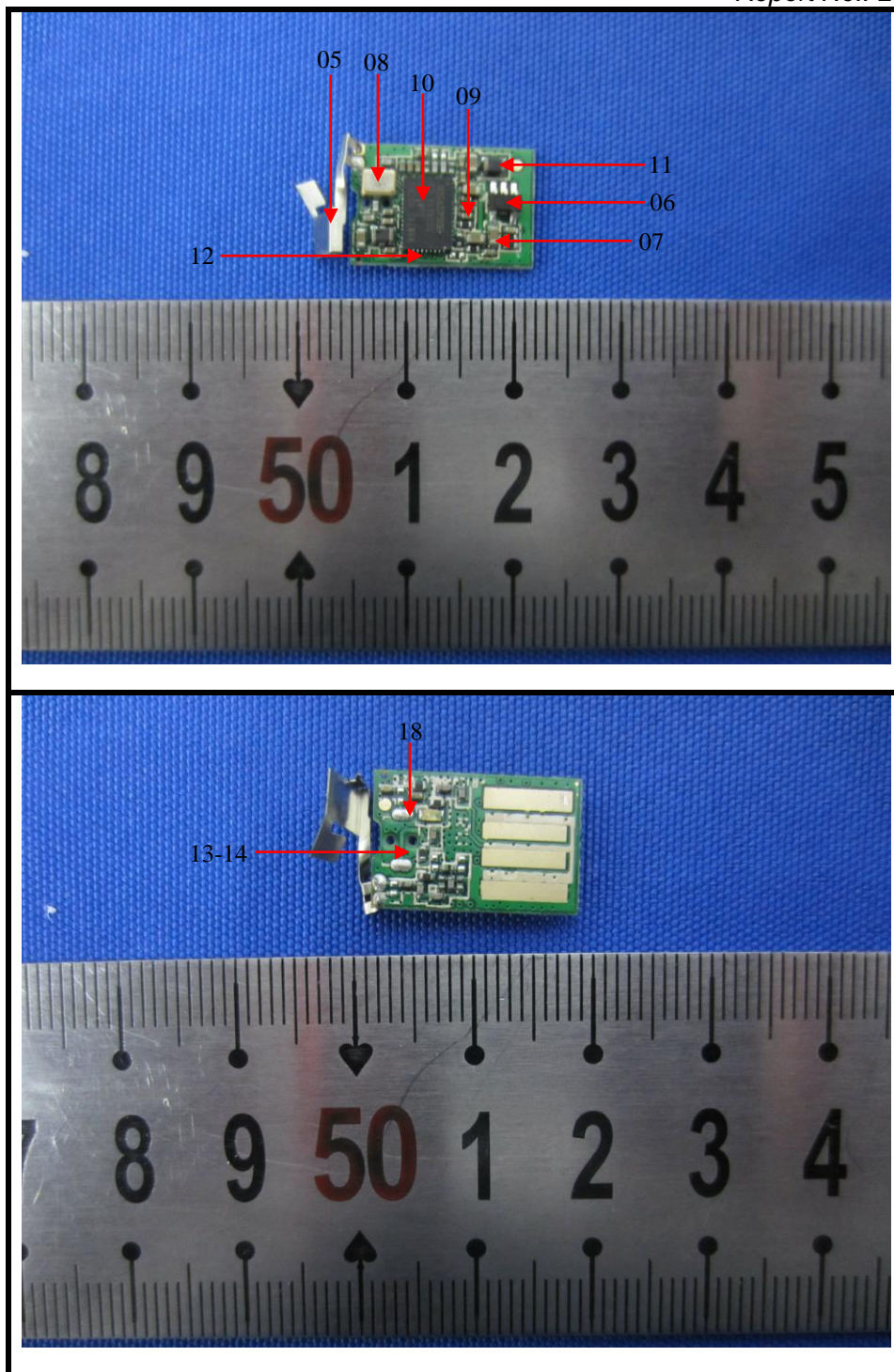
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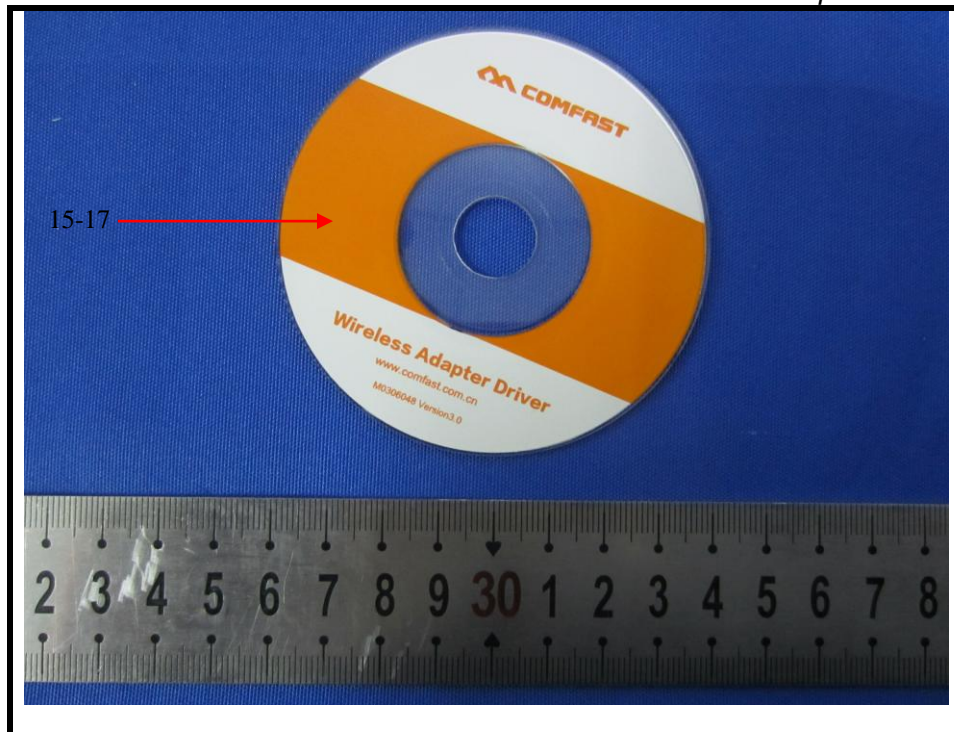
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LCS authenticate the photo on original report only

***** End of Report *****

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